

What is claimed is:

1. A payment system between a customer and a merchant comprising:
a central system; a portable wireless device; a merchant display terminal; and a
5 terminal identification tag with a display terminal identification; the central system,
the portable wireless device and the merchant terminal on a global computer
network; wherein the portable wireless device is used to effect a private and secure
payment transaction.

10 2. The claim as in 1, wherein the portable wireless device, with an interface
means, at time of payment transaction interfaces with a merchant system to receive
the merchant display terminal identification and a payment amount.

15 3. The claim as in 2, wherein the interface is via the portable wireless device
having an infrared reading element receiving a wireless transmission of the terminal
identification and a payment amount from a merchant system.

20 4. The claim as in 2, wherein the interface is via the portable wireless device
having a reading element reading the terminal identification from the terminal
identification tag and a payment amount is entered into it.

25 5. The claim as in 2, wherein on activating a payment function in the wireless
device, a data record including at-least the terminal identification, the payment
amount and a portable wireless device identification is transferred over the global
network to the central system.

30 6. The claim as in 5, wherein the central system assembles a payment
transaction record, including customer pre-stored bank account data, and submits
the payment transaction record to an automated clearing house (ACH), and receives
a payment authorization record and subsequently the central system sends the

payment authorization record to the merchant display terminal using the terminal identification as a uniform resource locator over the global computer network.

7. The claim as in 6, the payment transaction record submitted to the ACH

5 identifying a central system business entity bank for receiving payment amount from the ACH.

8. The claim as in 7, wherein, the central system having a database relating the merchant terminal identification and a merchant bank account identification

10 submitting a merchant payment record to the ACH for transferring an aggregate amount from a plurality of the payment transactions into a merchant bank account.

9. The claim as in 5, wherein the wireless device identification is a combination of a pre-programmed identification code and a customer entered card personal identification number (CPIN).

10. The claim as in 9, wherein the customer having a plurality of pre-stored account data in the central system, the customer entering the CPIN into the wireless device, identifying a specific account data to be used for a payment transaction.

20 11. The claim as in 10, wherein the CPIN is a combination of personal identification code verifying the customer and an account identification code identifying an account.

25 12. The claim as in 1, wherein the wireless device is a personal digital assistant adapted with a wireless modem, a reading element, and a payment function.

13. The claim as in 1, wherein the wireless device is a cellular telephone adapted with a reading element and a payment function.

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14. The claim as in 1, wherein the wireless device is a cellular telephone with a keypad enabling manual entry of the terminal identification and adapted with a payment function.

5 15. The claim as in 10, wherein, the central system maintaining a transaction database cataloging each payment transaction by a transaction reference, date, time, an authorization reference, payment amount, customer identification and merchant identification.

10 16. The claim as in 15, further comprising a merchant refund terminal on the global computer network, wherein the merchant entering into the refund terminal a refund record, including at-least the payment transaction reference from a previous payment transaction, the merchant identification, a refund authorizing password, a refund amount, and sending the refund record to the central system.

15 17. The claim as in 16, wherein, the central system receiving and verifying the elements of the refund record data with the transaction database, in particular verifying the refund amount is less than or equal to the payment amount, creating a refund record including the merchant account identification, refund amount and submitting to the ACH and receiving an approval, and forwarding that to the refund terminal.

20 18. The claim as in 17, the refund terminal comprising: a printer capable of printing a refund record.

25 19. The claim as in 18, further comprising: a customer interface with the central system enabling it to enter account data, account identification code, personal identification code and enabling it to create a search query to retrieve payment and refund transactions by type of transaction, transaction date, and merchant identification.

20. The claim as in 18, further comprising: a merchant interface with the central system enabling it to enter merchant identification, merchant account identification, terminal identification and enabling it create a search query to retrieve payment and refund transactions by type of transaction, by date, terminal identification, and
5 transaction reference number.

21. A payment system between a customer and a merchant comprising:
a central system; a payment card with an encrypted card number; a merchant card reader and a merchant display terminal; wherein the central system, the card reader,
10 and the display terminal are on a global computer network and wherein the payment card is used to effect a private and secure payment transaction.

22. The claim as in 21, wherein the payment card is swiped in the card reader and a card personal identification number (CPIN) is entered by the customer, the merchant terminal identification and a payment amount is entered into it by the merchant, and a data record including at-least the foregoing data and the encrypted card number is sent by the card reader over the global network to the central system.
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23. The claim as in 22, wherein the central system decrypts the payment card number and the CPIN to identify customer pre-stored bank card data and assembles a payment transaction record using bankcard data, submits the payment transaction record to an automated clearing house (ACH) and receives payment authorization record.
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24. The claim as in 22, the central system having a database having data on the terminal identification and the display terminal uniform resource locator, sends payment authorization record to the merchant display terminal using the uniform resource locator over the global computer network.
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25. The claim as in 23, the payment transaction record submitted to the ACH identifies a central system business bank for receiving payment amount from the ACH.

5 26. The claim as in 23, the central system, having a database with data on the merchant identification and a merchant bank account identification, submitting a merchant payment record to the ACH for transferring an aggregate amount from a plurality of the payment transactions into a merchant bank account.

10 27. The claim as in 26, wherein the encrypted card number embeds a decryption algorithm reference, enabling the central system using a decryption algorithm from a plurality of pre-stored algorithms to decipher the customer identification number.

15 28. The claim as in 26, wherein the encrypted card number and a bankcard number have similar format characteristics being indistinguishable from each other.

20 29. The claim as in 28, wherein the customer having a plurality of pre-stored accounts in the central system, the customer entering the CPIN into the card reader, wherein the CPIN is a combination of personal identification code verifying the customer and an account identification code.

30. A payment card for a payment transaction between a customer and a merchant comprising:
a substrate having a card number including a bank identification identifying a central bank, requiring entry of one of a plurality of card personal identification numbers (CPIN), when used for a payment transaction by a customer, wherein, the card number and the CPIN being received at the central bank and a security function therein using the card number identifying a customer identification and using both the customer identification and the CPIN, identifying a specific bankcard from a plurality of bankcards of the customer for processing the payment transaction.

31. The claim as in 30, wherein the card number including a 4-digit number in a date format, wherein the 4-digit number being used to access a security algorithm form a list of security algorithms in the security function to translate the card number to the customer identification.

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32. A payment system between a customer and a merchant comprising:
a central system; a portable wireless device; a payment card with an encrypted card number; a standard bankcard ; a merchant card reader and a merchant display terminal with an identification tag; the central system, the portable wireless device,
the merchant wireless card, reader and the display terminal are on a global computer network; wherein, at least one of the group including the portable wireless device, the payment card, and the bankcard, is selected by the customer to effect a payment transaction.

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33. The claim as in 32, wherein the standard card is swiped in the card reader, a card personal identification number (CPIN) is entered into it by the customer, a merchant identification and a payment amount is entered into it by the merchant; and a data record including at-least the foregoing data and the bank card number is transferred over the global network to the central system.

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34. The claim as in 33, wherein the central system with the bank card number and the CPIN to identify pre-stored remainder bank card data and assembles a payment transaction record, submits the payment transaction record to an automated clearance house and receives payment authorization record.

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35. The claim as in 34, the central system sends payment authorization record to the merchant display terminal using the terminal identification as a uniform resource locator over the global computer network.

36. The claim as in 34, the payment transaction record submitted to the ACH identifies a central system business bank for receiving payment amount from the ACH.

5 37. The claim as in 34, the central system, having a database between the terminal identification and a merchant bank account identification, submitting a merchant payment record to the ACH for transferring an aggregate amount from a plurality of the payment transactions into the merchant bank account.

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38. A cash withdraw system between a customer and an ATM machine comprising:

a central system; a portable wireless device; an ATM, an ATM identification on an ATM identification tag; the central system, the portable wireless device, and the ATM are on a global computer network; wherein, the portable wireless device is used to effect a cash withdraw transaction from the ATM.

15 39. The claim as in 38, the portable wireless device having an interface, wherein at time of withdraw transaction, the interface reads the ATM identification, a withdraw amount, a CPIN is entered into it; and a withdraw function in the wireless device is activated, enabling a data record including at-least the ATM terminal identification, the withdraw amount, a portable wireless device identification code and the CPIN to be transferred over the global network to the central system.

20 40. The claim as in 39, wherein the central system assembles a withdraw transaction record including the customer pre-stored bank account data and submits the withdraw transaction record to the ATM enabling the ATM to process and disburse withdraw amount to the customer while suppress printing of a record as the central system sends an e-mail notification to the wireless device.

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41. A payment system between two parties comprising:

a central system; a portable wireless device belonging to party A; the central system and the portable wireless device are on a global computer network; wherein the portable wireless device is used to effect a private and secure payment transaction to a party B.

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42. The claim as in 41, wherein at time of payment transaction from party A to party B, a party B identification and a payment amount is entered into the wireless device.

10 43. The claim as in 42, wherein the party B's identification is a party B's telephone number.

15 44. The claim as in 43, wherein on activating a payment function in the wireless device, a data record including at-least the party B's identification, the payment amount and a portable wireless device identification is transferred over the global network to the central system.

20 45. The claim as in 44, wherein the central system assembles a payment transaction record including at least the party A pre-stored bank account data, payment amount and identifies a central system business bank, submits the payment transaction record to an automated clearing house and receives a payment authorization record.

25 46. The claim as in 45, wherein the central system having a database with party B's identification and a party B's bank account identification, assembles a payment transaction record, including at-least party B's pre-stored bank account data, payment amount and identifies the central system bank and submits the payment transaction record to an automated clearing house and receives a payment authorization record.

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47. The claim as in 46, the central system, having a database with party A's e-mail address and party B's e-mail addresses, sends a notification of the payment authorization to the party A and party B's e-mail addresses.

5 48. The claim as in 43, wherein the wireless device identification is a combination of a pre-programmed identification code and a customer entered personal identification code.

10 49. The claim as in 43, wherein the wireless device is a personal digital assistant adapted with a wireless modem.

50. The claim as in 43, wherein the device is a cellular telephone.

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